

EXHIBIT D

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA

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SAN DIEGO UNIFIED PORT DISTRICT, a
public corporation; and CITY OF
SAN DIEGO, a municipal corporation,
Plaintiff, Case No.
vs. 3:15-cv-00578-
WQH-AGS
MONSANTO CORPORATION, SOLUTIA INC.
and PHARMACIA CORPORATION,
Defendant.

-----X

DEPOSITION OF LISA A. RODENBURG, Ph.D.
Parsippany, New Jersey
June 14, 2019

Reported by:
MARY F. BOWMAN, RPR, CRR
JOB NO. 161636

1 recall specifically withholding?

2 A. No.

3 Q. I take it then that the documents
4 provided, if you know, the documents
5 provided to us by counsel yesterday --
6 yesterday or Wednesday? Wednesday --
7 constitute all of the documents that you
8 turned over to him? Do you know that?

9 A. I don't really know that for a
10 fact.

11 MR. LAND: They are, I will
12 attest that they are.

13 Q. Did you agree with me that there
14 are PCBs present in the environment that
15 were not manufactured by Monsanto?

16 A. Yes.

17 Q. And would you agree with me that
18 some of those PCBs are sometimes referred
19 to as inadvertent or byproduct PCBs?

20 A. Yes.

21 Q. And if I referred to those PCBs
22 as byproduct PCBs, you will understand that
23 that's the same thing as an inadvertent
24 PCBs?

25 A. Yes.

1 Q. So we don't misunderstand each
2 other.

3 Those PCBs are created during
4 various manufacturing processes, correct?

5 A. Yes.

6 Q. And the necessary conditions
7 include the presence of chlorine carbon and
8 heat, correct?

9 A. I think there may be other
10 conditions, but those conditions will
11 produce PCBs.

12 Q. Now, as a result of these
13 miscellaneous chemical processes that
14 produce byproduct PCBs, they're found in
15 numerous products, correct?

16 A. Yes.

17 Q. Including products that are
18 routinely sold to consumers, correct?

19 A. Yes.

20 Q. And one of the main sources of
21 these PCBs are dyes, correct?

22 A. Pigments.

23 Q. Pigments, excuse me.

24 And most of those pigments for
25 the past few decades have been manufactured

1 in India and China, correct?

2 A. I believe that's true.

3 Q. And there have been various
4 studies of PCBs, for example, in municipal
5 products correct?

6 A. That's correct.

7 Q. And one was performed by the City
8 of Spokane in 2015, correct?

9 A. Correct.

10 Q. And we will mark this as 4
11 please.

12 (Exhibit 4, document entitled
13 "PCBs in Municipal Products" marked for
14 identification, as of this date.)

15 MR. GOUTMAN: Did you want a
16 copy?

17 MS. YANOCHIK: That would be
18 great.

19 Q. We have placed before you Exhibit
20 4, document entitled "PCBs in Municipal
21 Products"?

22 A. Yes.

23 Q. We showed it to you last time?

24 A. Yes.

25 Q. If you turn to page 3, table 1,

1 there is a list of various chemicals with
2 associated products in which byproduct PCBs
3 have been found, correct?

4 A. These are examples of chemicals
5 associated with inadvertent PCB production.
6 I'm not familiar with specific studies
7 where they found PCBs in these products.

8 Q. That wasn't my question. Please
9 listen to my question.

10 A. OK.

11 Q. Is this a table that purports to
12 represent chemicals in which byproduct PCBs
13 have been found and associated products?

14 A. That's what this table purports
15 to be, yes.

16 Q. Am I correct that the authors of
17 this study stated that byproduct PCBs are
18 found in surfactants, correct?

19 A. That's what it says.

20 MR. LAND: Objection, misleading.

21 You can -- you already responded.

22 Q. And what is an surfactant?

23 A. A surfactant is typically a soap
24 that is used to decrease the surface
25 tension in water and make it a better

1 solvent for dirt.

2 Q. Fungicides?

3 A. Those are used to kill fungi.

4 Q. Fuel additives?

5 A. Fuel additives can be added to
6 fuel for a variety of reasons.

7 Q. EDTA, what is that?

8 A. Ethylenediaminetetraacetic acid
9 is the correct name.

10 Q. In what products do you find
11 that?

12 A. That's used to bind metals so
13 used frequently as a preservative.

14 Q. Hair care products? We know what
15 that means, correct?

16 A. Yes, we know what that means.

17 Q. Soaps?

18 A. Soap.

19 Q. Byproduct PCBs have been found in
20 those products, correct?

21 A. Again, I don't remember
22 specifically finding them in those
23 products. I don't remember whether this
24 report found them specifically in those
25 products.

1 Q. Polyvinyl chloride?

2 A. Yeah, that's a plastic material.

3 Q. Solvents?

4 A. Solvents are solvents.

5 Q. Yup. Silicons, such as
6 lubricants, adhesives, coatings, hoses, as
7 I say, silicons used or in lubricants,
8 adhesives, coatings and hoses. Is that
9 what it says?

10 A. Yes.

11 Q. And certainly you would agree
12 that byproduct PCBs have been found in
13 silicons?

14 A. Yes.

15 Q. Pigments?

16 A. Yes.

17 Q. PCBs, byproduct PCBs have been
18 found in pigments, have they not?

19 A. Yes.

20 Q. Flame retardants in plastics,
21 paints, adhesives, sealants and caulks. Is
22 that what it says?

23 A. Yes.

24 Q. Byproduct PCBs have been found in
25 those products, correct?

1 A. I actually don't remember those
2 studies. I think you're probably correct.

3 Q. Toothpaste, just again reading
4 from table 1, toothpaste, numerous personal
5 care products, antifreeze, resins, are
6 those the products listed?

7 A. Yes.

8 Q. And byproduct PCBs have been
9 found in those products, correct?

10 A. Some of those, yes.

11 Q. Which of those have they not, as
12 far as your memory serves?

13 A. I don't remember.

14 Q. Am I correct that inadvertent
15 PCBs are ubiquitous?

16 MR. LAND: Objection, vague.

17 You can answer.

18 A. Yes.

19 Q. And "ubiquitous" means that they
20 are pretty much anywhere, correct?

21 A. Correct.

22 Q. That would mean they are in your
23 house, where you work, in schools, et
24 cetera?

25 A. Yes.

1 Q. Found in your clothes?

2 A. Yes. Possibly.

3 Q. Found, you find them in boxes
4 that contain food?

5 A. Yes. I have found them there.

6 Q. Paper that kids write on?

7 A. I don't remember finding them in
8 paper that kids write on.

9 Q. Post-Its?

10 A. As I recall, Post-Its if, they
11 had PCB 11 in them, they were very low. I
12 can't remember if they were low detected or
13 not.

14 Q. We can refresh your recollection.

15 MR. GOUTMAN: Off the record.

16 THE VIDEOGRAPHER: The time is
17 9:29 a.m. we are off the record.

18 (Recess)

19 THE VIDEOGRAPHER: The time is
20 9:30 a.m. we are back on the record.

21 Q. We are marking as Exhibit 5 a
22 PowerPoint that you did, created.

23 (Exhibit 5, document Bates
24 stamped HARTROD 2277 through 2309
25 marked for identification, as of this

1 pigments in plastics." Correct?

2 A. Yes.

3 Q. "From 26 countries and five
4 continents," correct?

5 A. Correct.

6 Q. "Washing of clothing introduces
7 PCBs to waste water," is that what you
8 wrote?

9 A. Correct.

10 Q. And that's a fact, isn't it?

11 A. As far as I know, yes.

12 Q. All of this is as far as you
13 know, you understand that?

14 A. Yes.

15 Q. If you look at the figure on this
16 slide, it indicates that PCBs, byproduct
17 PCBs have been found in brown cardboard,
18 right?

19 A. Yes.

20 Q. Color glossy magazine, right?

21 A. Yes.

22 Q. Color newspaper?

23 A. Yes.

24 Q. Yellow cereal box?

25 A. Yes.

1 Q. Yellow plastic bag?

2 A. Yes.

3 Q. Yellow sticky note?

4 A. Yes.

5 Q. It's been found in all kinds of
6 countries, right? Georgia?

7 A. Yes.

8 Q. Which used to be part of the
9 Soviet Union?

10 A. Yes.

11 Q. It's not like Atlanta, Georgia,
12 correct?

13 A. Yes.

14 Q. Moldova, M-O-L-D-O-V-A, right?

15 A. Yes.

16 Q. China?

17 A. Yes.

18 Q. In fact, there is a lot of recent
19 literature on the existence of byproduct
20 PCBs in various environmental matrices in
21 China, correct?

22 A. Correct.

23 Q. You're familiar with the papers?

24 A. I don't know which specific
25 papers you are referring to, but I'm

1 familiar with some of them.

2 Q. Costa Rica, correct?

3 A. Is that -- what's the question?

4 Q. I'm just reading your slide.

5 Does it say Costa Rica?

6 A. Yes.

7 Q. Does that say, was it put there
8 because byproduct PCBs have been found
9 there?

10 A. In the paper there, yes.

11 Q. So I'm listing these because you
12 indicated, at least as I interpret this
13 slide, that these are countries where
14 byproduct PCBs have been measured, correct?

15 A. They are places where I received
16 paper materials and the PCBs were measured
17 in those paper materials.

18 Q. OK. Czech Republic?

19 A. Yes.

20 Q. Ukraine?

21 A. Yes.

22 Q. Thailand?

23 A. Yes.

24 Q. Netherlands?

25 A. Yes.

1 Q. Italy?

2 A. Yes.

3 Q. Uzbekistan?

4 A. Yes.

5 Q. Argentina?

6 A. Yes.

7 Q. Switzerland?

8 A. Yes.

9 Q. Spain?

10 A. Yes.

11 Q. United Kingdom?

12 A. Yes.

13 Q. South Korea?

14 A. Yes.

15 Q. Taiwan?

16 A. Yes.

17 Q. Sweden?

18 A. Yes.

19 Q. India?

20 A. Yes.

21 Q. Finland?

22 A. Yes.

23 Q. Myanmar?

24 A. Yes.

25 Q. Japan?

1 A. Yes.

2 Q. Kyrgyzstan,
3 K-Y-R-G-Y-S-Z-S-T-A-N?

4 A. Yes.

5 Q. Greece?

6 A. Yes.

7 Q. Brazil?

8 A. Yes.

9 Q. New Zealand?

10 A. Yes.

11 Q. And Monsanto never manufactured
12 PCBs in most of these countries, right?

13 A. Correct.

14 Q. In fact, virtually any of them,
15 right?

16 A. That's my understanding, yes.

17 Q. Byproduct PCBs have been found in
18 kid's socks, right?

19 A. Yes.

20 Q. A woman's tank top?

21 A. Excuse me?

22 Q. Yes?

23 A. Sorry. Yes.

24 Q. Woman's tank top.

25 Kid's white sweatshirt?

1 A. Yes.

2 Q. Kid's pink knit shirt?

3 A. Yes.

4 Q. Kid's pink sock?

5 A. Yes.

6 Q. Kid's yellow sock?

7 A. Yes.

8 Q. Kid's green sock?

9 A. Yes.

10 Q. A dishwash cloth?

11 A. Yes.

12 Q. Kid's pajama back?

13 A. Yes.

14 Q. What's a pajama back?

15 A. The child's pajamas typically
16 have a front and back, and the front will
17 frequently have some sort of printing on it
18 whereas the back will just be a solid color
19 so that's why we tested them separately.

20 Q. And you found PCBs -- byproduct
21 PCBs on both the front and back?

22 A. Correct.

23 Q. You found byproduct PCBs in
24 napkins?

25 A. Yes.

1 Q. Kids' handkerchief?

2 A. Yes.

3 Q. Kids magic towel?

4 A. Yes.

5 (Exhibit 6, document entitled
6 "Inadvertent PCB Production and Its
7 Impact on Water Quality" marked for
8 identification, as of this date.)

9 Q. So we have placed in front of you
10 another one of your PowerPoints, correct?

11 A. Correct.

12 Q. Once again, in this PowerPoint --
13 do you know who you were addressing here?

14 A. I don't remember.

15 Q. In any event, when you present
16 information in this area, inadvertent or
17 byproduct PCBs, you make every effort to
18 ensure that the information you are giving
19 is accurate and correctly reflects the
20 opinions that you hold, correct?

21 A. Correct.

22 Q. So in this PowerPoint, if I can
23 direct your attention to page 5, once again
24 it's titled, "PCB 11 concentration and
25 consumer goods." Correct?

1 A. Yes.

2 Q. And that reflects the same sort
3 of information that was reflected in the
4 PowerPoint that was Exhibit 4, correct?

5 A. Yes. This appears to be an older
6 version because it doesn't have all the
7 information.

8 Q. OK, but once again, you're
9 stating -- and this will be a compound
10 question to which, I'm just trying to save
11 time, to which your attorney might
12 object -- you found byproduct PCBs in
13 printed newspaper?

14 A. Yes.

15 Q. Cardboard?

16 A. Yes.

17 Q. Magazine?

18 A. Yes.

19 Q. Newspaper?

20 A. Yes.

21 Q. Cereal box?

22 A. Yes.

23 Q. Yellow sticky note?

24 A. Yes.

25 Q. Is that a PostIt?

1 A. Yes.

2 Q. Newspaper print from countries
3 around the world?

4 A. Yes.

5 Q. As well as food boxes from
6 Czechoslovakia and Ukraine, correct?

7 A. I think that's the Czech
8 Republic.

9 Q. Czech Republic, sorry, I'm dating
10 myself.

11 A. Correct.

12 Q. And Ukraine?

13 A. Yes, correct.

14 Q. And you indicate that, on the
15 right box, you say, "One cereal box can
16 contaminate approximately 2000 liters of
17 water at a water quality standard of 95
18 picograms per liter. Is that what you
19 write?

20 A. Yes.

21 Q. What's that based on?

22 A. That's based on calculating the
23 partitioning, so estimating the
24 concentration of mass of PCB 11 in a cereal
25 box and calculating its partitioning into

1 water and how much water you would have to
2 have that concentration equal 64 picograms
3 per liter which is the -- or at least at
4 that time was the federal water quality
5 standard for the sum of PCBs.

6 Q. So are you indicating that one
7 cereal box can contaminate a volume of
8 water such that it reaches the federal
9 water quality standard of 64 picograms?

10 MR. LAND: Objection, misleading.

11 You can answer.

12 A. Under ideal conditions, yes.

13 Q. Just one cereal box, is that
14 correct?

15 A. Yes, in my calculations, yes.

16 Q. And that would be a byproduct
17 PCBs?

18 A. Yes.

19 Q. If you can skip to page 7, you
20 are familiar with Hu and Hornbuckle study,
21 is that correct?

22 A. Yes.

23 Q. And you've reproduced figure 2
24 from their 2010 paper.

25 A. Correct.

1 Q. 187?

2 A. Yes.

3 Q. And 206, 7, 8, 9?

4 A. Yes.

5 Q. And then on page 9, you talk
6 about various locations in which
7 inadvertent PCBs were detected in various
8 bodies of water above the federal water
9 quality standard of 63 picograms per liter,
10 correct?

11 A. Correct.

12 Q. That included Halifax Harbor?

13 A. Yes.

14 Q. New York/New Jersey Harbor?

15 A. Yes.

16 Q. Delaware River?

17 A. Yes.

18 Q. Houston Ship Channel?

19 A. Yes.

20 Q. San Francisco Bay?

21 A. Yes.

22 Q. So if Monsanto had never invented
23 PCBs, just because of inadvertent PCBs,
24 those bodies of water would not meet the
25 federal water quality standard, is that

1 get Exhibit 8 back out, Dr. Rodenburg.

2 MS. YANOCHIK: It's this one --

3 A. With the no cover page? I wonder
4 what happened to the cover page.

5 Q. Could you go to page 2169?

6 A. Yes.

7 Q. One bullet I would like to read
8 from you, you were talking about PCB 11,
9 correct?

10 A. Yes.

11 Q. And you say virtually all of it
12 gets out into the environment, is that what
13 you say here?

14 A. Yes.

15 Q. Would you agree with me that
16 inadvertent PCB concentrations in pigments
17 have been identified up to 2500 PPM, parts
18 per million?

19 A. I'm sorry, wait until we deal
20 with the noise.

21 Q. Sure.

22 A. Could you repeat the question?

23 Q. Sure. Would you agree with me --
24 and again we went over this with you in
25 Hartford, but we will go over it again.

1 Would you agree with me in the
2 literature, byproduct PCB concentrations
3 have been documented as being up to 2500
4 parts per million?

5 A. That sounds about right, yes.

6 Q. Why don't we mark this as next
7 exhibit.

8 (Exhibit 11, transcript dated
9 September 25, 2017 marked for
10 identification, as of this date.)

11 Q. So we went over this with you in
12 Seattle. Do you recall that? Excuse me,
13 in Seattle?

14 A. In New Jersey.

15 Q. That's what it seems like.

16 In New Jersey in another -- in a
17 case that we took your deposition with last
18 year, correct?

19 A. That's correct.

20 Q. We took your deposition last year
21 I should say.

22 And this was a transcript of a
23 webinar you gave in September of 2017,
24 right?

25 A. Yes.

1 Q. And if you turn to page 52, I
2 would like you to read, since this is a
3 transcription of what you said, starting at
4 line 13 and continue to read until page 53,
5 line 10. Fair enough?

6 A. Yes.

7 Q. Go ahead.

8 A. I'm sorry, from line 13.

9 Q. Line 13 on page 52 on down
10 through page 53, line 10.

11 A. Right.

12 "And the one PCB congener that
13 is now dominant in the effluent is PCB 11
14 which is the one that comes from pigments.
15 And so this is a problem for the City of
16 Spokane or the County of Spokane because
17 they can go after the Aroclor type sources.
18 They are one of the cities suing Monsanto,
19 for example. They can try to remove all
20 transformers and capacitors. You know,
21 they can try to do to remove the
22 Aroclor-type PCBs from their system.

23 "But that's not their main
24 problem. Their main problem is PCB 11 for
25 pigments and what are they going to do

1 about that? That's quite difficult because
2 people are always going to use color
3 printed, you know, paper and they are
4 always going to wear printed clothing and
5 they are always going to have these
6 pigments in their system. There is not
7 much that Spokane County can do about their
8 worst PCB problem."

9 Q. And that was in reference to work
10 you did on behalf the County of Spokane,
11 correct?

12 A. Yeah, let me clarify. When I say
13 City of Spokane, I corrected myself to
14 County of Spokane because at that point I
15 had not seen data from the City of Spokane.

16 Q. Why don't you turn to, I'm sorry,
17 page 54. And in the middle of the page,
18 line 10, start reading at -- in the
19 sentence that starts with, "You get to the
20 Delaware River."

21 A. "You get to the Delaware River
22 and you see the big black bar. That big
23 black bar is due to the production of
24 titanium dioxide at a plant in Edgemore,
25 Delaware. So that's a non-Aroclor source

1 CERTIFICATE

2 STATE OF NEW JERSEY)

)ss:

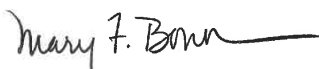
3 COUNTY OF UNION)

4 I, MARY F. BOWMAN, a Registered
5 Professional Reporter, Certified
6 Realtime Reporter, and Notary Public
7 within and for the State of New Jersey,
8 do hereby certify:

9 That LISA A. RODENBURG, Ph.D.,
10 the witness whose deposition is
11 hereinbefore set forth, was duly sworn
12 by me and that such deposition is a
13 true record of the testimony given by
14 such witness.

15 I further certify that I am not
16 related to any of the parties to this
17 action by blood or marriage and that I
18 am in no way interested in the outcome
19 of this matter.

20 In witness whereof, I have
21 hereunto set my hand this 19th day of
22 June, 2019.

23
24 

25 MARY F. BOWMAN, RPR, CRR